To: Enck, Judith[Enck.Judith@epa.gov]

From: Laurel Schaider

**Sent:** Thur 9/22/2016 3:00:24 PM

Subject: Re: Silent Spring Institute research on PFASs in drinking water

Dear Administrator Enck,

Thank you very much for taking time to talk with me recently. It was great to hear your perspective on Hoosick Falls and other water quality challenges that you are addressing. I appreciate your offer to share information about our research on PFASs in septic systems to others in Region 2. I will send you that overview soon.

In the meantime, I would greatly appreciate if you would write a letter of support for the Research to Action proposed project entitled, "Health assessment, public education, and capacity-building in communities impacted by PFAS-contaminated drinking water," that we are submitting as an R01 to NIEHS in early October. The goals of this project are to: engage with two communities affected by PFAS-contaminated drinking water from AFFF, evaluate immune responses among children in these communities exposed to PFASs during early life, develop an online community portal for community education and engagement and offer tap water testing, conduct community interviews, and develop educational outreach materials for residents, physicians and nurses, and water and health agencies.

Our team includes Phil Brown from Northeastern University, Courtney Carignan from Harvard School of Public Health, Alissa Cordner from Whitman College, and myself. Community groups include Testing for Pease (Portsmouth, NH) and Massachusetts Breast Cancer Coalition (Hyannis, MA), as well as Toxics Action Center, which is working on multiple PFAS sites throughout the Northeast. We also have a Science Advisory Board that will include Dick Clapp and Philippe Grandjean. We have very strong relationships with the affected communities and have been helping them in multiple ways already. Courtney Carignan, Dick Clapp and I are on the ATSDR Community Assistance Panel for the Pease site. Phil's team from Northeastern will actually be in North Bennington next week doing research interviews, though that's not part of the proposal.

Below are the Specific Aims. If you indeed can write a letter and want a more complete description of these aims, I'll be glad to send them:

- 1. To evaluate immune responses among children exposed to PFASs via AFFF-contaminated drinking water.
- 2. To develop an online portal, the PFAS Exchange, as a resource with report-back tools, educational materials, and opportunities to connect impacted communities, and to offer tap water testing.
- 3. To study individual, family, and community-level experience of residents in areas impacted by PFAS-contaminated drinking water.
- 4. To develop educational outreach materials for community members and physicians and nurses, and engage with governmental agencies responsible for water quality and biomonitoring.

I'd be happy to draft a letter for you if you can do this.

We hope to submit on September 30 in case of any errors in the submission, so we'd appreciate your letter by Sept. 29. Many thanks for considering it.

Sincerely, Laurel

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Laurel Schaider, PhD
Research Scientist
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On Tue, Sep 6, 2016 at 1:45 PM, Enck, Judith < Enck. Judith@epa.gov > wrote:

call me at 212 637 5050 anytime between 10 and 3pm. thanks, Judith Enck

**From:** Laurel Schaider < schaider@silentspring.org > **Sent:** Tuesday, September 6, 2016 1:38:08 PM

To: Enck, Judith

Subject: Re: Silent Spring Institute research on PFASs in drinking water

Dear Judith,

Will you be available to talk anytime tomorrow?

Thanks, Laurel

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Laurel Schaider, PhD Research Scientist Silent Spring Institute

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On Mon, Aug 22, 2016 at 4:44 PM, Laurel Schaider < schaider@silentspring.org > wrote:

Dear Judith, Will do! Enjoy the rest of your summer!

Best, Laurel

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On Mon, Aug 22, 2016 at 4:25 PM, Enck, Judith < Enck. Judith@epa.gov > wrote:

Hi dr Schaider. Thank you for contacting me. I am out of the office until Labor Day. After Labor Day please call me at 212 637 5000. Thanks. Judith

Sent from my iPhone

On Aug 22, 2016, at 7:15 AM, Laurel Schaider <<u>schaider@silentspring.org</u>> wrote:

Dear Administrator Enck,

Dick Clapp at Boston University suggested that I reach out to you. I am a water quality researcher at <u>Silent Spring Institute</u>, a research organization dedicated to understanding links between chemicals in our daily environment and health. We have been studying per- and polyfluoroalkyl substances (PFASs) in drinking water on Cape Cod since 2010, and have been following the unfolding situation in Hoosick Falls and elsewhere. I would welcome the opportunity to talk with you to learn more about the current situation in Hoosick Falls and more broadly in Region 2, and to discuss potential ways that Silent Spring Institute could assist.

Dick and I are both serving as technical advisors for the ATSDR Community Assistance Panel at the former Pease AFB in Portsmouth, NH. A public well serving the current Pease Tradeport District was found to have highly elevated PFOS, and a local organization, Testing for Pease, successfully advocated for blood testing for residents, including children who attended daycare at Pease. Dick and I presented at a community event organized by Testing for Pease to assist residents in interpreting the results of blood

testing conducted by the State of NH. Residents had many questions about how to interpret their results and some felt the report-back materials they received did not adequately address their concerns.

The Testing for Pease group has requested that the State of NH consider using an innovative digital report-back interface developed by Silent Spring Institute called DERBI (Digital Exposure Report-Back Interface). For years, our team at Silent Spring Institute, led by our Executive Director Julia Brody, has studied methods for effective report-back of chemical biomonitoring results. We published a <a href="https://docs.ncbi.org/handbook">handbook</a> to summarize our methods, which have been highlighted by NIEHS and adopted by other studies. We have used our new DERBI tool, which generates both print and online reports, to develop report-back for the Child Health and Development Studies and the CDC's Green Housing Study (examples provided at the bottom of this <a href="page">page</a>). I think that DERBI could be a powerful and useful way to report results back to residents in communities affected by PFASs whose blood has been tested for PFOA and other PFASs.

Our research on Cape Cod drinking water began in 2010, and we've measured PFASs in both <u>public</u> and <u>private</u> drinking water wells. In a few wells, we found relatively high concentrations of PFOS, presumably from firefighting foams. We have also found lower concentrations of PFASs in many more wells that we think may be coming from septic systems. More broadly, our results have gotten me thinking about septic systems as sources of groundwater PFAS contamination, particularly in areas where drinking water has undergone contamination for extended periods of time such as Hoosick Falls, and the potential for plumes from residential areas served by septic systems to be a disperse source of PFASs even after implementation of drinking water treatment.

I was also a co-author on a recent paper, published in ES&T Letters, that analyzed associations between PFAS data collected through UCMR3 and the presence of contamination sources within sub-basins. The study traces possible sources of contamination to military fire training areas and airports, as well as industrial sites and wastewater treatment plants. While this paper provides a roadmap for identifying other water supplies at risk, the situation at Hoosick Falls demonstrates some of the limitations of this analysis, which did not include facilities such as Saint Gobain, nor small public water supplies or private wells.

I would welcome an opportunity to talk with you and learn more about how Region 2 is addressing PFASs, and I would also be happy to tell you more about our DERBI tool. Please let me know if there is a convenient time to talk sometime in the next couple of weeks.

Thank you in advance for your time!

Best regards, Laurel

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